

Page 1 of 1

All amounts are calculated in domestic currency.

All Vendors	PO ID PO29581	All Receipt Dates	All Line Item Types
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Purchase Order ID/ Curr Type	Line Nbr/ Insp	Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name VC-COP001 Thyssenkrupp Materials CA Ltd												
PO29581	1	No		M6061T6R0.625 f	f	8/28/2015	8/28/2015	12.0000	\$2.23	0.0000	0	\$26.76
CAD				6061-T6 Round Bar .625"	f	12.0000	DCUSER		\$26.76	0.0000	0	
	2	No		M303R0.750 f	f	8/28/2015	8/28/2015	120.0000	\$2.71	0.0000	0	\$325.68
				303 Round Bar 0.750"	f	120.0000	DCUSER		\$325.68	0.0000	0	
	3	No		M303R0.625 f	f	8/28/2015	8/28/2015	12.0000	\$2.48	0.0000	0	\$29.72
				303 Round Bar 0.625"	f	12.0000	DCUSER		\$29.72	0.0000	0	
	4	No		74401-45		8/28/2015	8/28/2015	1.0000	\$0.00	0.0000	0	\$0.00
				PROCUREMENT QUALITY CLAUSES		1.0000	DCUSER		\$0.00	0.0000	0	
Total Received Quantity:										145.0000		
Total Qty to Inspect (PO U/M):										0.0000		
Total Reject Quantity:										0.0000		
Total Receipt Value:										\$382.16		
Total Balance Due Quantity:										0.0000		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID PO29581
Purchase Order Date 8/25/2015
PO Print Date 8/25/2015

Page Number 1 of 2

Order From :

VC-COP001

Ship To : DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL-C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CANADA

FAXED

Contact Name
Vendor Phone
Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

905 669 9444

VENDORS TRUCK

Buyer
Customer POID
Customer Tax #
Terms
Currency
FOB
Chantal Lavoie
10127-2607
Net 30
CAD
FCA - (Free Carrier)

Line	Reference	Description/	Reg Date/	CD	Reg Qty/	Unit of	Measure	PO Unit Price	Extended
Nbr	Vendor Part Number	Line Comments	Promise Date						Price
		Delivery Comments							

1	M6061T6R0.625	6061-T6 Round Bar .625"	8/28/2015	Yes	12.00	f		\$2.92	\$35.00
MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221									

2	M303R0.750	303 Round Bar 0.750	8/28/2015	Yes	120.00	f		\$3.55	\$426.00
MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: AISI 304/316 NOT ACCEPTABLE									

Line Total: \$426.00

Line Total: \$35.00

13/8/28
54

Note:

8/25/2015



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID PO29581
Purchase Order Date 8/25/2015
PO Print Date 8/25/2015

Page Number 2 of 2

Order From :

VC-COP001

Ship To : DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275, POSTAL "A"
TORONTO, ON M5W 5V8
CANADA

Contact Name

Vendor Phone

905 669 9444

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Currency

CAD

Terms

Net 30

Customer Tax #

10127-2607

Customer POID

Chantal Lavoie

Buyer

3 M303R0.625

303 Round Bar 0.625"

8/28/2015

Yes

12.00

f

\$3.24

\$38.88

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

4 71401-45

PROCUREMENT
QUALITY CLAUSES

8/28/2015

No

1.00

\$0.00

\$0.00

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM

BAR

AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS

4117/4128/4115/4116

OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR

ASTM B211 OR

ASTM B221

Line Total:

\$0.00

PO Total:

\$499.88

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 8/25/2015

No: PEC ST-838811

Q U O T A T I O N

Quoted By:

THYSSENKRUPP MATERIALS NA

2821 LANGSTAFF ROAD

CONCORD, ONTARIO L4K 5G6

Tel: 905 669 9444 Fax: 905-738-9033

Quoted To: (20115)

DART AEROSPACE

1270 ABERDEEN ST

HAWKESBURY, ON K6A 1K7

Quoted Ship To: (1)

DART AEROSPACE

1270 ABERDEEN ST

HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS

Qtd 24Aug15 Qte Ref

Via Ctc CHANTAL

FOB

Slp STAN IVERS (905-532-1350)

Tel 613-632-9577 Fax 613-632-1053

Q U O T A T I O N

Test Certs: Chem-Y Phys-Y 1 original copies with Shipment, 1 with Invoice

1 ALUMINUM ROUND BAR 6061-T6511

.625" DIA X 144.0000"

MATERIAL

ENERGY & CAP SURCHG

1 PCS @

35.0000 EA

35.00

25.00

2 STAINLESS STEEL ROUND BAR 303 STAINLESS

.750" DIA X 144.0000"

MATERIAL

120 FT @

3.5500 FT

180 LBS

120 FT

426.00

3 STAINLESS STEEL ROUND BAR 303 STAINLESS

.625" DIA X 144.0000"

MATERIAL

12 FT @

3.2500 FT

12 LBS

12 FT

39.00

MILIT TEST REPORTS, PACKING SLIPS ARE TO SENT WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR TO SHIPPING.

ATTN: CHANTAL/LINDA

** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **

** REFERENCED ON IT **

Price in effect at time of shipment.

Price based on receipt of total order.

All weights are theoretical.

All orders are subject to credit approval.

*** TEL. 800-926-2600 ***

*** CUSTOMER PICK-UP HOURS ***

*** 9:00 AM TO 4:00 PM ***

WE STOCK STAINLESS STEEL!!!

* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT *

***PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

ADDED TO EVERY ORDER.***

No: PEC ST-838811

Q U O T A T I O N

Quoted By:

THYSSENKRUPP MATERIALS NA

2821 LANGSTAFF ROAD

CONCORD, ONTARIO L4K 5C6

Tel: 905 669 9444 Fax: 905-738-9033

Quoted To: (20115)

DART AEROSPACE

Quoted Ship To: (1)

DART AEROSPACE

QT No: PEC ST-838811

Q U O T A T I O N
*FOR OUR FULL SALES TERMS AND CONDITIONS, PLEASE
*VISIT OUR WEBSITE: www.copperandbrass.com

Material Processing Freight Other Taxes ORDER AMT
500.00 25.00 68.25 593.25
Taxes: ONHSTS 68.25 0.00 0.00
Order Totals: 3 Items 197 LBS

Ship From: THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 905-738-9033

Ship To: (1)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7
Tel: 613-632-9577 Fax: 613-632-1053

Ship Date 26Aug15 at 10:34 From PFW
No: PEC 950985

Via VIM DELIVERY
FOB CONCORD
Frt PREPAID
Route 0 - 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7

B I L L O F L A D I N G

1) Our Order PEC-839203 - 1 Your PO # 29581	ALUMINUM ROUND BAR 6061-T6511	.625" DIA X 144.0000"	Heat Number 40958-100	Tag No 447737	Quantity 12 FT	PCS 1	Wt LBS 4
2) Our Order PEC-839203 - 2 Your PO # 29581	STAINLESS STEEL ROUND BAR 303 STAINLESS	.750" DIA X 144.0000"	Heat Number V9E0	Tag No 447738	Quantity 120 FT	PCS 10	Wt LBS 182
3) Our Order PEC-839203 - 3 Your PO # 29581	STAINLESS STEEL ROUND BAR 303 STAINLESS	.625" DIA X 144.0000"	Heat Number AB-2342	Tag No 447739	Quantity 12 FT	PCS 1	Wt LBS 12
TOTAL: 3 Tags 12 PCS 12 LBS 198							

Heat Number 40958-100
AB-2342
V9E0

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE RAPPORTÉES IMMEDIATEMENT.
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY.
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

DATE

DATE

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE
RAPPORTÉES IMMÉDIATEMENT.
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY.
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

Page: 2 Last

*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA
CONCORD, ONT.* ** 9:00 AM TO 4:00 PM ***
***** TEL. 800-926-2600 *****
* WE STOCK STAINLESS STEEL
* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT

***PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE
ADDED TO EVERY ORDER.***
THYSSENKRUPP MATERIALS NA WILL CONDUCT THEIR
INVENTORY, SEPT. 24 & 25/2015. THERE WILL BE NO
CUSTOMER PICKUPS THOSE DAYS. HOWEVER, THE SALES
OFFICE WILL REMAIN OPEN.

TOTAL 1 BDL GW. 204 LBS

TO SHIPPING.
ATTN: CHANTAL/LINDA
** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **
** REFERENCED ON IT **

B I L L O F L A D I N G

No: PEC 950985
Ship Date 26Aug15 at 10:34 From PFW
Probill
Via VIM DELIVERY
FOB CONCORD
Frt PREPAID
Route 0 - 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE

Ship From:
THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 905-738-9033
Ship To: (1)
DART AEROSPACE

MANUFACTURED IN USA (SHERMAN, TX) MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

Miscellaneous Notes

ASTM-B221-14 NON-STENCILLED ASME-SB221.1998 SEC II AMS-QQ-A-200/8 07/BEAF 2012 UNS#A96067 (T9511 also conforms to T6-not applicable to other tempers)

Applicable Requirements:

LIMITS		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Fe	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	NA	0.00	0.00
146008	.74	.36	.24	.09	.88	.10	.12	.02	.01	.00	.00	.00	.01	.03

Chemical Composition (wt%), Aluminum Remainder

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
40958-100	0001	1	48.1	42.4	15.0	RE	N/A	N/A
40958-100	0001	2	48.1	42.4	15.0	RE	N/A	N/A
40958-100	0001	3	47.3	41.6	16.0	RE	N/A	N/A
40958-100	0001	4	45.7	39.0	18.0	RE	N/A	N/A
40958-100	0001	5	45.7	39.8	17.0	RE	N/A	N/A
40958-100	0001	6	46.2	39.5	17.0	RE	N/A	N/A
40958-100	0001	7	45.6	39.1	15.0	RE	N/A	N/A

Actual Physical Properties

CUSTOMER PO NUMBER:		PEC-267331-1		R87/STK		PRODUCT DESCRIPTION:	
CUSTOMER PART NUMBER:						625 +/-004 ROD	
SHIP DATE:		06/02/2015		40958-100		TRANSFER LOT NUMBER:	
QUANTITY:		001		6061		ALLOY:	
WEIGHT SHIPPED:		0.000 PCS		DIA/DIA/T/HKNS.		TEMPER	
SHIP TO:		0.000 LB		B/L NUMBER:		LENGTH	
		612125		SOLD TO:		FT	
THYSSENKRUPP CANADA		2821 LANGSTAFF ROAD		THYSSENKRUPP CANADA		2821 LANGSTAFF ROAD	
CONCORD, ON L4K 5C6 CANADA		CONCORD, ON L4K 5C6 CANADA					

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

KAISER
ALUMINUM
FABRICATED PRODUCTS

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

DART AEROSPACE
ALUMINUM ROUND BAR 6061-T6511
PART NO. .625" DIA X 144.0000"

THYSSENKRUPP MATERIALS NA

Certificate of Mill Test Results

KAISER
ALUMINUM
FABRICATED PRODUCTS

Bob M. Goss

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgment form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Almee L. Macnowski, Quality & Technology Manager

Almee L. Macnowski

PO/Rel 29581

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

BL PEC-950985-002



740 Imperial Road North

METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

Certificate: 80687 7 Mail To:

THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:

THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Date: 7/28/2015 Page: 1

Steel: 303

Finish: CD

Corrosion:

Your Order: PEC268105

NAS Order: PN 0054556 04

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
ASTM A582/13 EN 10204 3.1, ASTM A484/11
AMS 5640U TYPE 1, QQS-764B CONDITION A
SOLUTION ANNEAL TEMP 1900F MIN

REMARKS:

COMPLIES W/REQUIREMENTS OF DEAR 252.225-7009 EU DIRECTIVE
2011/65/EU. ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

DAS
14
9-89

15/08/31

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BH3396 2		7500		1.104	144.00	7	1	

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
V950	US	.0422	.2075	17.0435	.3085	1.8195	.3065	.0458	8.2410	.0285
S %										

MECHANICAL PROPERTIES

Product Id	Ad o i c r	HB	.2YS KSI	UTS KSI	RA %	Elong % 4D
BH3396 2	RL	197.0	85.05	111.10	51.00	42.60

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

ASB

PO/Rel 29581

We certify that this is a true copy of the report
furnished by the producer of the metal, or data
resulting from tests made in approved labs.

Signed by:



740 Imperial Road North

METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

Certificate: 80687 8

Mail To:

THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:

THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Date: 7/28/2015 Page: 1

Steel: 303

Finish: CD

Corrosion:

Your Order: PEC268105

NAS Order: PN 0054556 04

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
ASTM A582/13 EN 10204 3.1, ASTM A484/11
AMS 5640U TYPE 1, QOS-764B CONDITION A
SOLUTION ANNEAL TEMP 1900F MIN

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU-ROHS. EAF+ADD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

DAS
14
9-89

150831

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BH3396 5		.7500		1.104	144.00	8	1	

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
V9E0	US	.0422	.2075	17.0435	.3085	1.8195	.3065	.0458	8.2410	.0285
S %										

MECHANICAL PROPERTIES

Product Id	Id	HB	.2YS	UTS	RA	FIng
BH3396 5	RL	197.0	85.05	111.10	51.00	42.60

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

ASB

PO/Rel 29581

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:



740 Imperial Road North

METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

Mail To:

Certificate: 80687 9
Customer: 007206 001
THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:

THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Date: 7/28/2015 Page: 1

Steel: 303

Finish: CD

Corrosion:

NAS Order: PN 0054556 04

PEC268105

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
ASTM A582/12 EN 10204 3.1, ASTM A484/11
AMS 5640U-TYPE 1, QQS-764B CONDITION A
SOLUTION ANNEAL TEMP 1900F MIN

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

DAS

14

9-89

150831

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BH3396 6		.7500		1.104			2	1

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)
Lab Accreditation Bureau, ISO/IEC 17025, Certificate# I2323
Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	NI %	N %	P %
V9E0	US	.0422	.2075	17.0435	.3085	1.8195	.3065	.0458	8.2410	.0285
S % SI %										
.3515 .6015										

MECHANICAL PROPERTIES

Product Id	l d o i c z	HB	.2YS KSI	UTS KSI	RA %	Elong % 4D
BH3396 6	R L	197.0	85.05	111.10	51.00	42.60

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

ASB

PO/Rel 29581

We certify that this is a true copy of the report
furnished by the producer of the metal, or data
resulting from tests made in approved labs.

Signed by:



740 Imperial Road North

Mail To:
THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:
THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

Date: 7/28/2015 Page: 1

Steel: 303

Finish: CD

Corrosion:

NAS Order: PN 0054556 04

Your Order: PEC268105

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
ASTM A582/13 EN 10204 3.1, ASTM A484/11
AMS 5640U TYPE 1, QQS-764B CONDITION A
SOLUTION ANNEAL TEMP 1900F MIN

REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE
2011/65/EU. ROHS. EAP+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

DAS
14
9-89

1510831

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BH3396 9		.7500		814	144.00	10	1	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
V920	US	.0422	.2075	17.0435	.3085	1.8195	.3065	.0458	8.2410	.0285
S %										

MECHANICAL PROPERTIES

Product Id	l d o i c r	HB No.	.2YS KSI	UTS KSI	RA %	Elong % 4D
BH3396 9	R L	205.0	86.66	107.80	35.18	20.62

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy
of the test methods used, the material meets the specifications stated. These results relate only to the items
tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

ASB

7/28/2015

Certificate of Mill Test Results

26 Aug 15
Pg 1/1

THYSSENKRUPP MATERIALS NA

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

DART AEROSPACE
STAINLESS STEEL ROUND BAR 303 STAINLESS
PART NO. 625" DIA X 144.0000"

AMERICA		INSPECTION CERTIFICATE	
Customer Order No.	PEC-253287	Invoice Date	10/04/2015
Customer Order No.	100040	Invoice No.	151610009
Certificate No.	1516-00000565	Date	30/04/2015

THYSSENKRUPP MATERIALS NA
2821 Langstaff Rd
Concord, Ontario L4K 5C6
Canada

Trade Mark
Inspector's Mark
ASSL
ASSL

Material Details	Shape	Round	Size	0.6250 Rnd
Heat No.	AS 2342	Tolerance	A-84 (CF)	Length of Bars
Net Weight	6300.03 LBS	Number of Bars	50	Making Process
Source No's	AG-9460	Requirements	AMS 6640U-2007	DAS 14 9-89

Chemical Analysis %											
C	Si	Mn	P	S	Cr	Mo	Ni	Cu			
0.150	0.150	0.150	0.030	0.030	17.450	0.230	8.160	0.420			
0.150	0.150	0.150	0.030	0.030	17.450	0.230	8.160	0.420			

Mechanical Properties											
YS/UTS	UTS	% Elongation	% Reduction Area	Hardness							
ASTM A 370 (M)	ASTM A 370 (M)	ASTM A 370 (M)	ASTM A 370 (M)	ASTM A 370 (M)							
140	255	232.000	255	140							

Heat Treatment: Solution Annealed @ 1050°C, Soaking for 1hr, Quenching & Water Quenching

- Remarks:
- Chemical Composition - Verified through Gamma Ray Spectrometer
 - Welding Test - Satisfactory
 - Non-destructive Examination - OK
 - Visual Examination - OK
 - Surface & Dimensional Inspection - OK
 - Surface & Dimensional Inspection - OK
 - Surface & Dimensional Inspection - OK

ASSL
THYSSENKRUPP MATERIALS NA

AMERICA Stainless Steel Limited
10000 Highway 100, Unit 100, New Berlin, WI 53234, USA
Tel: +1 (414) 455-5555 Email: info@americastainless.com Web: www.americastainless.com

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: H6061T6 DATE: 15/08/31

MATERIAL CERT REC'D: 42 QUANTITY RECEIVED: 12'

QUANTITY INSPECTED: 12' QUANTITY REJECTED: _____

THICKNESS ORDERED: R. 625 THICKNESS RECEIVED: R. 625

SHEET SIZE ORDERED: _____ SHEET SIZE RECEIVED: _____

PO / BATCH NO.: 29581/H133053

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION **ENGINEERING SIGNOFF (if required)**

INSPECTED BY: 9-89 14 DAS SIGNED OFF BY: _____

DATE: 15/08/31 DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

PO / BATCH NO.: 29581/M133053

THICKNESS ORDERED: R. 750
 THICKNESS RECEIVED: R. 750
 SHEET SIZE ORDERED:
 SHEET SIZE RECEIVED:

MATERIAL: H303
 DATE: 15/08/31

MATERIAL CERT REC'D: yea
 QUANTITY RECEIVED: 120'
 QUANTITY INSPECTED: 120'
 QUANTITY REJECTED:

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING		
HRC				
HRB				
DUR A				
DUR D				

Testers located in the Quality Office

QC 18 INSPECTION **ENGINEERING SIGNOFF (if required)**

INSPECTED BY: 14 9-89
 DATE: 15/08/31
 SIGNED OFF BY:
 DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

PO / BATCH NO: 29581/H133053

MATERIAL: M303
DATE: 15/08/31

THICKNESS ORDERED: R.625
THICKNESS RECEIVED: R.625
SHEET SIZE ORDERED:
SHEET SIZE RECEIVED:

MATERIAL CERT REC'D: 40
QUANTITY RECEIVED: 12'
QUANTITY INSPECTED: 12'
QUANTITY REJECTED:

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT MATERIAL	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	
CORRECT M# ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION **ENGINEERING SIGNOFF (if required)**

INSPECTED BY: DAS 14 9-89 15/08/31 DATE:

SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in